IN THE CLAIMS:

The following is a complete listing of claims in this application.

1. (currently amended) A method of detecting a deposit (D) having a thermally insulating nature inside a fluid transport pipe (2) through which fluid is flowing, and which comprises a pipe wall having an outside surface, the deposit thermally insulating the pipe wall from fluid being transported by the pipe, the method comprising:

· applying a thermal gradient (G) to ~~at least one active zone (Za) of~~ the outside surface of the pipe, the thermal gradient being transmitted substantially to the pipe wall when an insulating deposit is present;

· measuring the heat flux (F) ~~in at least one zone (Zm) of~~ on the outside surface of the pipe ~~that is situated~~ at a given distance from the ~~active zone~~ application of the heat flux along the length of the pipe;

determining a threshold value for heat flux at the given distance indicative of the presence of an insulating deposit of predetermined thickness; and

· detecting when the heat flux ~~corresponding at least in part to the applied thermal gradient and transmitted by the pipe~~ measured at the given distance exceeds ~~a determined~~ the threshold value, indicating ~~indicative of~~ the presence of an insulating deposit inside the pipe.

2. (previously presented) A method according to claim 1, comprising applying a thermal gradient (G) in a determined cycle.

3. (currently amended) A method according to claim 1, comprising applying a thermal gradient (G) ~~in an active zone (Za) constituting~~ around a circumference of the pipe.

4. (previously presented) A method according to claim 1,

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comprising applying a thermal gradient (G) via a heat production source (3) fitted to or integrated in the pipe.

5. (previously presented) A method according to claim 1, comprising measuring the heat flux (F) at one or more sectors of a circumference of the pipe.

6. (previously presented) A method according to claim 1 comprising measuring the heat flux (F) by means of a heat flux sensor (7) fitted to or integrated in the pipe.

7. (previously presented) A method according to claim 1, comprising determining the thickness of the deposit (D) by comparing the measured heat flux with the heat flux measured during a calibration stage.

8. (currently amended) An installation for detecting a deposit having a thermally insulating nature (D) inside a fluid transport pipe ~~(2)~~ through which fluid is flowing, and which comprises a pipe wall and an outside surface, the deposit insulating the pipe wall from fluid flowing through the pipe, the installation comprising:

· at least one ~~production~~ source ~~(3)~~ for producing a thermal gradient (G)~~, the source being constructed and arranged for mounting on an active zone (Za) of~~ mounted on the outside surface of the pipe, the thermal gradient being transmitted substantially to the pipe wall when ~~an~~ the thermally insulating deposit is present;

· at least one measurement sensor ~~(7)~~ for measuring heat flux (F)~~, the sensor being constructed and arranged for mounting on a zone (Zm) of~~ mounted on the outside surface of the pipe situated at a given longitudinal distance from the ~~active zone~~ source; and

· control and monitoring means ~~(5)~~ connected to the production source ~~(3)~~ and to the measurement sensor ~~(7), and~~ adapted to determine a threshold value for the heat flux at the given distance indicative of the presence of an insulating

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deposit of predetermined thickness inside the pipe, and to detect when the heat flux ~~corresponding at least in part to the applied thermal gradient and transmitted by the pipe wall~~ measured at the given distance exceeds ~~a determined~~ the threshold value indicative of the presence of an insulating deposit inside the pipe.

9. (previously presented) An installation according to claim 8, wherein the monitoring means (5) comprises means for determining the thickness of the deposit by comparing the measured heat flux and the heat flux measured during a calibration stage.

10. (previously presented) An installation according to claim 8, wherein the control and monitoring means (5) comprise means for detecting peak values of a measured heat flux signal so that the peak-to-peak value of the signal can be compared with the threshold value indicating the presence of a deposit inside the pipe.

11. (previously presented) An installation according to claim 8, wherein the production source (3) for producing a heat gradient is constituted in the form of a flexible band fitted to or integrated in the pipe.

12. (previously presented) An installation according to claim 8, wherein the measurement sensor for measuring heat flux (7) is formed by a flexible band equipped with one or more flux meters and fitted to or integrated in the pipe.

13. (new) A method of detecting a deposit (D) having a thermally insulating nature inside a fluid transport pipe (2) through which fluid is flowing, and which comprises a pipe wall having an outside surface, the deposit thermally insulating the pipe wall from fluid being transported by the pipe, the method comprising:

· applying a thermal gradient (G) to the outside surface of the pipe in a predetermined cycle, the thermal gradient

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being transmitted substantially to the pipe wall when an insulating deposit is present;

· measuring the heat flux (F) on the outside surface of the pipe at a given distance from the application of the heat flux along the length of the pipe;

· comparing variations in the measured heat flux with variations in the predetermined cycle; and

· determining if a correlation between the variations in the predetermined cycle and the variations in the measured heat flux is sufficient to indicate the presence of a deposit inside the pipe.

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